

We claim:

1. A method for assessing the metastatic potential of a breast cell comprising:  
detecting expression of a gene in a test breast cell, wherein the gene comprises a  
sequence selected from the group consisting of SEQ ID NOS:1-37; and

comparing a level of expression of the gene in the test breast cell with a level of  
5 expression the gene in a control breast cell, wherein the control breast cell is of known  
metastatic potential;

wherein the level of expression of the gene in the test breast cell relative to the level  
of expression in the control breast cell is indicative of the metastatic potential of the test  
breast cell.

10 2. The method of claim 1, wherein the gene comprises a sequence selected from the  
group consisting of SEQ ID NOS:12 and 13, the control breast cell is a breast cell of low  
metastatic potential, and wherein a level of expression of the gene in the test breast cell  
significantly greater than in the control breast cell is indicative of high metastatic potential of  
15 the test breast cell.

20 3. The method of claim 1, wherein the gene comprises a sequence selected from the  
group consisting of SEQ ID NOS:1-11 and 14-37, the control breast cell is a breast cell of  
high metastatic potential, and wherein a level of expression of the gene in the test breast cell  
significantly greater than in the control breast cell is indicative of low metastatic potential of  
the test breast cell.

4. A method for detecting a cancerous assessing the metastatic potential of a colon  
cell comprising:

25 detecting expression of a gene in a test colon cell, wherein the gene comprises a  
sequence selected from the group consisting of SEQ ID NOS:1-9, and 12-37; and

comparing a level of expression of the gene in the test colon cell with a level of  
expression the gene in a control colon cell, wherein the control colon cell is of known  
metastatic potential;

wherein the level of expression of the gene in the test colon cell relative to the level of expression in the control colon cell is indicative of the metastatic potential of the test colon cell.

5           5. The method of claim 4, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:12 and 13, the control colon cell is a colon cell of low metastatic potential, and wherein a level of expression of the gene in the test colon cell significantly greater than in the control colon cell is indicative of high metastatic potential of the test colon cell.

10           6. The method of claim 4, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:1-9 and 14-37, the control colon cell is a colon cell of high metastatic potential, and wherein a level of expression of the gene in the test colon cell significantly greater than in the control colon cell is indicative of low metastatic potential of the test colon cell.

15           7. A method for assessing the metastatic potential of a lung cell comprising:  
detecting expression of a gene in a test lung cell, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:5-7, 9, 10, 14, 18, 22, and 37;  
20       and

comparing a level of expression of the gene in the test lung cell with a level of expression the gene in a control lung cell, wherein the control lung cell is of known metastatic potential;

25       wherein the level of expression of the gene in the test lung cell relative to the level of expression in the control lung cell is indicative of the metastatic potential of the test lung cell.

30           8. The method of claim 7, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:5, 6, 7, 10, 14, and 22, the control lung cell is a lung cell of low metastatic potential, and wherein a level of expression of the gene in the test lung cell significantly greater than in the control lung cell is indicative of high metastatic potential of the test lung cell.

9. The method of claim 7, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:9, 18, and 37, the control lung cell is a lung cell of high metastatic potential, and wherein a level of expression of the gene in the test lung cell significantly greater than in the control lung cell is indicative of low metastatic potential of the test lung cell.

10. A method for detecting a cancerous breast cell comprising:  
detecting expression of a gene in a test breast cell, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:1-37; and

10 comparing a level of expression of the gene in the test breast cell with a level of expression of the gene in a control breast cell, wherein the control breast cell is of known cancerous state;

15 wherein the level of expression of the gene in the test breast cell relative to the level of expression in the control breast cell is indicative of the cancerous state of the test breast cell.

11. A method for detecting a cancerous colon cell comprising:  
detecting expression of a gene in a test colon cell, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS: 1-9, and 12-37; and

20 comparing a level of expression of the gene in the test colon cell with a level of expression of the gene in a control colon cell, wherein the control colon cell is of known cancerous state;

25 wherein the level of expression of the gene in the test colon cell relative to the level of expression in the control colon cell is indicative of the cancerous state of the test colon cell.

12. A method for detecting a cancerous lung cell comprising:  
detecting expression of a gene in a test lung cell, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:5-7, 9, 10, 14, 18, 22, and 37; and

30 comparing a level of expression of the gene in the test lung cell with a level of expression of the gene in a control lung cell, wherein the control lung cell is of known cancerous state;

wherein the level of expression of the gene in the test lung cell relative to the level of expression in the control lung cell is indicative of the cancerous state of the test lung cell.

13. A method for identifying a cancerous prostate cell comprising:

5 detecting expression of a gene in a test prostate cell, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS:2, 11, 19, 20, 21, and 34-36; and

comparing a level of expression of the gene in the test prostate cell with a level of expression the gene in a control cell of normal prostate;

10 wherein the relative level of expression of the gene in the test prostate cell compared to the level of expression in the control prostate cell is indicative of the cancerous state of the test prostate cell.

14. A method for inhibiting metastasis of a cancerous cell comprising introducing  
15 into a mammalian cell a vector comprising a polynucleotide at least 88% identical to the polynucleotide of SEQ ID NOS:1-11 and 14-37, said introducing resulting of expression of the polynucleotide and inhibition of development of a metastatic phenotype in the cell.

15. A method for inhibiting metastasis of a cancerous cell comprising introducing  
20 into a mammalian cell an antisense polynucleotide for inhibition of expression of a gene comprising a sequence selected from the group consisting of SEQ ID NOS:5-7, 10, 14, 12, 13, 14, and 22, wherein inhibition of expression of the gene inhibits development of a metastatic phenotype in the cell.

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